

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Andrew Chang *et al.*

Appl. No.: *To be assigned (Continuation of Appl. No. 09/855,031; Filed: May 15, 2001)*

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For: **High Performance Network Switch**

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Art Unit: *To be assigned*

Examiner: *To be assigned*

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**Communication to Examiner**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination of this application on the merits, Applicants respectfully request that the Examiner consider the following comments regarding the pending claims and the references cited in the allowed parent Application No. 09/855,031, the references being *Manning et al.*, U.S. Patent No. 5,870,538 and *Inoue et al.*, U.S. Patent No. 5,907,660, hereafter, "*Manning*" and "*Inoue*."

In the allowed parent application, some of the claims were cancelled with the intention of pursuing the subject matter claimed therein in a continuation application. Also, in the parent application, in the Final Office Action dated July 30, 2003, the Examiner discussed his understanding of the disclosures of *Manning* and *Inoue*. Specifically, the Examiner stated that *Manning* discloses the use of in-band control information, and that it is obvious to combine *Manning* with *Inoue*, which teaches an equivalent of multiple stripes. Applicants respectfully disagree with this interpretation of both references.

Starting with *Inoue*, *Inoue* is directed to encoding and recording of image data, not to data transmission. For example, *Inoue* describes, at column 17, line 10 through

column 18, line 15, that image frames can be divided into blocks of 8 lines by 8 pels, which are referred to as DCT blocks. A plurality of DCT blocks are grouped to form a macroblock. A plurality of macroblocks are grouped to form a slice. A plurality of slices form a frame. This frame is then recorded. In other words, *Inoue* is not directed to transmission of data across a switching fabric. The DCT blocks, macroblocks and slices are merely hierarchical sub-units of a frame, they are not in any sense equivalent to multiple stripes recited in the pending claims. Also, control information for a recording device (such as recording block size, checksum, etc.) is fundamentally different from control information for a data transmission device.

In plain English, the slices of *Inoue* are no more equivalent to multiple stripes than two bytes of a word are equivalent to multiple stripes. This is to be contrasted with the recited stripes, whose data only has meaning when combined with data from other stripes.

With regard to *Manning*, the Examiner stated that *Manning* discloses in-band control information at column 5, lines 9-20. The Examiner referred to the serial data signal 40, discussed in column 5, which can be provided with a header. Applicants respectfully point out that, as noted in the parent case, *Manning* describes a rather conventional handshake mechanism used in ATM transmission. As may be seen from Figure 1, *Manning* discloses a serial data connection 40 and a serial control bus 42 (in the case of Figure 1, the serial control 42 bus has 7 lines, and the data is transmitted serially over 4 lines, designated as 40). Accepting, arguendo, the Examiner's view that *Manning* discloses "in-band control information," a separate 7-line control bus 42 would be superfluous and unnecessary. At the same time, the specification of *Manning* is replete with references to the serial control bus 42. Clearly, taking the serial control bus of 42 out of *Manning* would completely change the nature of the device described in

*Manning*. What the Examiner contends is *Manning's* in-band control information is nothing more than a conventional packet header that does not have, for example, destination information.

The disclosures of *Manning* and *Inoue* are to be contrasted with the language of, for example, pending claim 1. Pending claim 1 recites multiple stripes that are being provided to the switching fabric. Each such stripe has in-band control information. This in-band control information is used to control traffic flow through the switching fabric of the data present in the multiple stripes. Nothing in *Manning* suggests that the headers described in column 5, lines 9-20 can be used to control traffic flow in this manner. In fact, *Manning* uses request and grant control signals (i.e., out-of-band signals, see col. 5, lines 5-55) to control traffic flow.

Turning again to *Inoue*, *Inoue* does not disclose multiple stripes. The slices of *Inoue* are in no sense equivalent to multiple stripes that a switching fabric "works on." *Inoue's* slices are merely subunits of a video frame, in the same sense as bits are subunits of a byte, bytes are subunits of a word, and words are subunits of a doubleword. If the video data of *Inoue* were to be transmitted using the device described in *Manning*, it would be treated the same way by *Manning* as any other data stream—in other words, the device in *Manning* would not recognize "slices" or "headers" of *Inoue*, and would not work if it tried. No combination of *Manning* and *Inoue* will result in a switching fabric that uses the in-band control information to control data traffic flow of data in multiple stripes. In other words, the addition of *Inoue* to *Manning* does not provide it with multiple stripes, nor does it provide it with in-band control information that is used to control data traffic flow.

The discussion above regarding multiple stripes is also applicable to claim 10. Additionally, claim 10 recites the aspect of the cross points routing the stripes

independently of each other based on the in-band control information. This aspect is discussed, for example, in paragraph 0081 of the present specification. This aspect is also not taught or suggested in either *Manning* or *Inoue* or any combination thereof. Accordingly, at least for these reasons, claim 10 is also allowable over *Manning* and *Inoue*.

Pending independent claim 15 recites "each blade outputs serial data streams with in-band control information and payload data in multiple stripes." As discussed above, at least these aspects are not taught or suggested in *Manning* or *Inoue*, singly or in combination. Additionally, claim 15 recites that the switching fabric switches the data streams in the multiple stripes based on the in-band control information. The headers of either *Manning* nor *Inoue* are not used by the switching fabric (assuming that *Manning* actually discloses a switching fabric) to switch data in multiple stripes (even assuming that there are stripes, much less multiple stripes, in either *Manning* or *Inoue*). In *Manning*, the destination information is communicated out-of-band (using the control bus 42), not in-band.

Accordingly, for reasons discussed above, the pending independent claims 1, 10 and 15, and all their dependent claims, are allowable over *Manning* and *Inoue*, singly or in combination.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully  
requested.

Respectfully submitted,

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